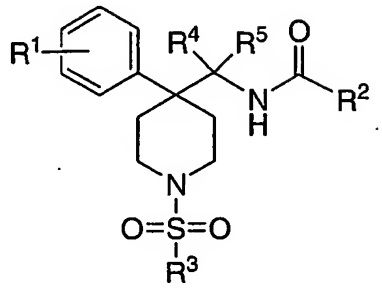
WHAT IS CLAIMED IS:

1. A compound of the formula I:



I

wherein:

R^1 is selected from the group consisting of:

(1) hydrogen,

(2) C_{1-6}alkyl, which is unsubstituted or substituted with halogen, hydroxyl or phenyl,

(3) -O-C_{1-6}alkyl, or

(4) halogen;

R^2 is selected from the group consisting of:

(1) C_{1-6}alkyl, which is unsubstituted or substituted with halogen, hydroxyl or phenyl,

(2) C_{3-7}cycloalkyl, which is unsubstituted or substituted with halogen, hydroxyl or phenyl,

(3) phenyl, which is unsubstituted or substituted with one or more substituents independently selected from:

(a) -C_{1-6}alkyl, which is unsubstituted or substituted with

(i) halogen,

(ii) phenyl,

(iii) -$NR^{10}R^{11}$,

(b) -O-C_{1-6}alkyl, which is unsubstituted or substituted with 1-6 fluoro,

(c) halogen,

(d) hydroxy,

(e) -SCF_3,

(f) -$SCHF_2$,

(g) -SCH_3,

(h) $-CO_2R^9$,

wherein R^9 is independently selected from:

(i) hydrogen,

(ii) $-C_{1-6}$alkyl, which is unsubstituted or substituted with 1-6 fluoro,

(iii) benzyl, and

(iv) phenyl,

(i) -CN,

(j) $-NR^{10}R^{11}$,

wherein R^{10} and R^{11} are independently selected from:

(i) hydrogen,

(ii) $-C_{1-6}$alkyl, which is unsubstituted or substituted with hydroxy, 1-6 fluoro or $-NR^{12}R^{13}$, where R^{12} and R^{13} are independently selected from hydrogen and $-C_{1-6}$alkyl,

(iii) $-C_{5-6}$cycloalkyl,

(iv) -pyrrolidinyl, which is unsubstituted or substituted with $NR^{10a}R^{11a}$,

(v) benzyl, and

(vi) phenyl,

(k) $-CONR^{10}R^{11}$, and

(l) $-NO_2$, and

(4) heterocycle, wherein heterocycle is selected from: benzoimidazolyl, benzimidazolonyl, benzofuranyl, benzofurazanyl, benzopyrazolyl, benzotriazolyl, benzothiophenyl, benzoxazolyl, carbazolyl, carbolinyl, cinnolinyl, furanyl, imidazolyl, indolinyl, indolyl, indolazinyl, indazolyl, isobenzofuranyl, isoindolyl, isoquinolyl, isothiazolyl, isoxazolyl, naphthpyridinyl, oxadiazolyl, oxazolyl, oxazoline, isoxazoline, oxetanyl, pyranyl, pyrazinyl, pyrazolyl, pyridazinyl, pyridopyridinyl, pyridazinyl, pyridyl, pyrimidyl, pyrrolyl, quinazolinyl, quinolyl, quinoxalinyl, tetrahydropyranyl, tetrazolyl, tetrazolopyridyl, thiadiazolyl, thiazolyl, thienyl, triazolyl, azetidinyl, 1,4-dioxanyl, hexahydroazepinyl, piperazinyl, piperidinyl, pyridin-2-onyl, pyrrolidinyl, morpholinyl, thiomorpholinyl, dihydrobenzoimidazolyl, dihydrobenzofuranyl, dihydrobenzothiophenyl, dihydrobenzoxazolyl, dihydrofuranyl, dihydroimidazolyl, dihydroindolyl, dihydroisooxazolyl, dihydroisothiazolyl, dihydrooxadiazolyl, dihydrooxazolyl, dihydropyrazinyl, dihydropyrazolyl,

dihydropyridinyl, dihydropyrimidinyl, dihydropyrrolyl, dihydroquinolinyl, dihydrotetrazolyl, dihydrothiadiazolyl, dihydrothiazolyl, dihydrothienyl, dihydrotriazolyl, dihydroazetidinyl, methylenedioxybenzoyl, tetrahydrofuranyl, and tetrahydrothienyl, and N-oxides thereof, which is unsubstituted or substituted with one or more substituents independently selected from:

(a) -C_{1-6}alkyl,
(b) -O-C_{1-6}alkyl,
(c) halogen,
(d) hydroxy,
(e) phenyl,
(f) trifluoromethyl,
(g) -OCF_3,
(h) -SCF_3,
(i) -$SCHF_2$,
(j) -SCH_3,
(k) -CO_2R^9,
(l) -$NR^{10}R^{11}$, and
(m) -$CONR^{10}R^{11}$;

R^3 is C_{1-6}alkyl, which is unsubstituted or substituted with halogen;

R^4 and R^5 are independently selected from the group consisting of:

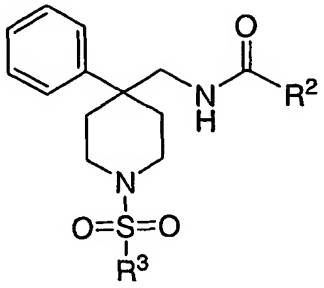
(1) hydrogen, and
(2) C_{1-6}alkyl,

or R^4 and R^5 may be joined together to form a cyclohexyl or cyclopentyl ring;

with the proviso that if R^1, R^4 and R^5 are hydrogen and R^3 is unsubstituted C_{1-6}alkyl, R^2 is other than 2-methoxy-phenyl;

and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

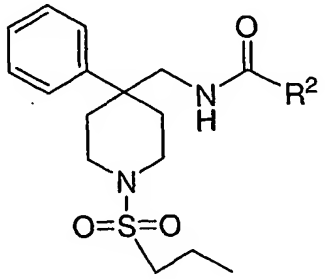
2. The compound of Claim 1 of the formula Ia:



Ia

and pharmaceutically acceptable salts thereof and individual enantiomers and diastereomers thereof.

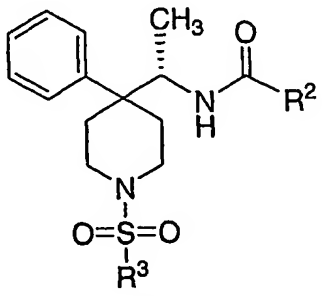
3. The compound of Claim 2 of the formula Ic:



Ic

and pharmaceutically acceptable salts thereof and individual enantiomers and diastereomers thereof.

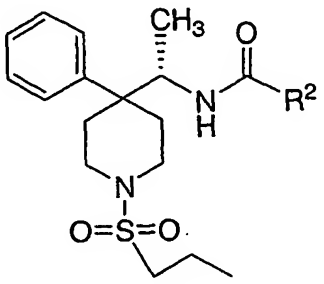
4. The compound of Claim 1 of the formula Ib:



Ib

and pharmaceutically acceptable salts thereof and individual enantiomers and diastereomers thereof.

5. The compound of Claim 4 of the formula Id:



Id

and pharmaceutically acceptable salts thereof and individual enantiomers and diastereomers thereof.

6. The compound of Claim 1 wherein R^1 is hydrogen.

7. The compound of Claim 1 wherein R^1 is fluoro.

8. The compound of Claim 1 wherein R^2 is phenyl, which is unsubstituted or substituted with one or more substituents independently selected from:

(a) -C_{1-6}alkyl,
(b) halogen,
(c) hydroxy,
(d) trifluoromethyl,
(e) -OCF_3,
(f) -$OCHF_2$,
(g) -SCF_3,
(h) -$SCHF_2$, and
(i) -NH_2.

9. The compound of Claim 8 wherein R^2 is phenyl, which is unsubstituted or substituted with one or more substituents independently selected from:

(a) halogen,

(b) trifluoromethyl, and
(c) $-OCF_3$.

10. The compound of Claim 9 wherein R^2 is phenyl, which is unsubstituted or substituted with halogen.

11. The compound of Claim 1 whereinwherein R^2 is pyridyl, which is unsubstituted or substituted with one or more halogen.

12. The compound of Claim 1 wherein R^3 is C_{1-6}alkyl.

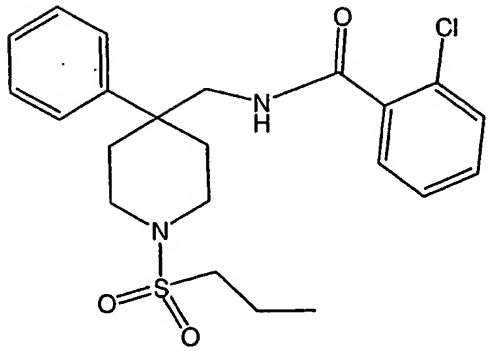
13. The compound of Claim 12 wherein R^3 is $-(CH_2)_2CH_3$.

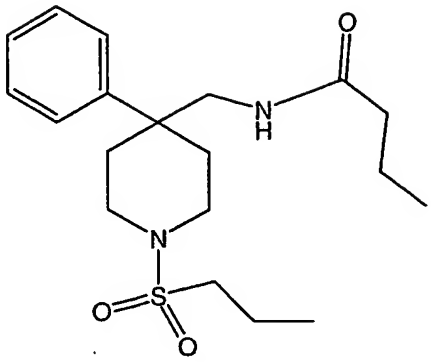
14. The compound of Claim 1 wherein R^4 is hydrogen and R^5 is hydrogen.

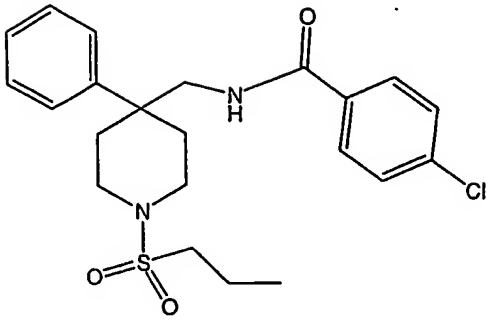
15. The compound of Claim 1 wherein R^4 is C_{1-3}alkyl and R^5 is hydrogen.

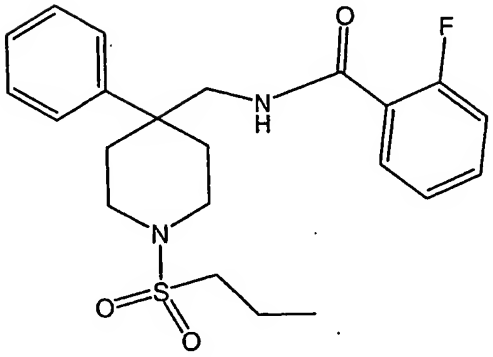
16. The compound of Claim 15 wherein R^4 is $-CH_3$ and R^5 is hydrogen.

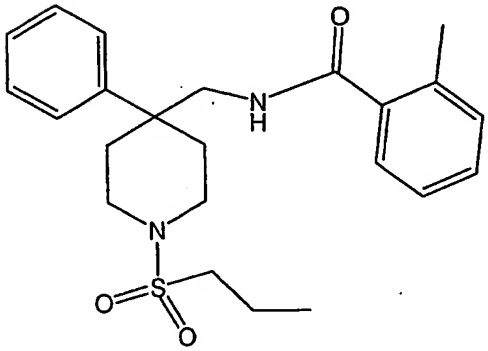
17. A compound which is selected from the group consisting of:

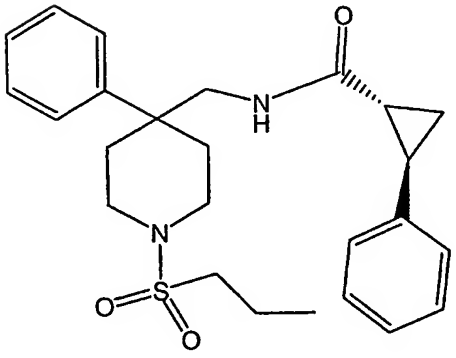


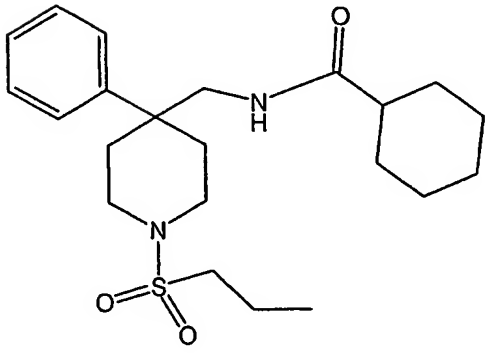


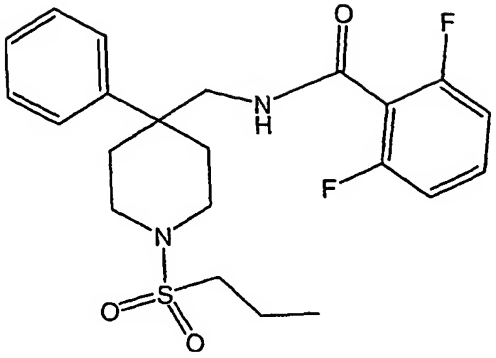


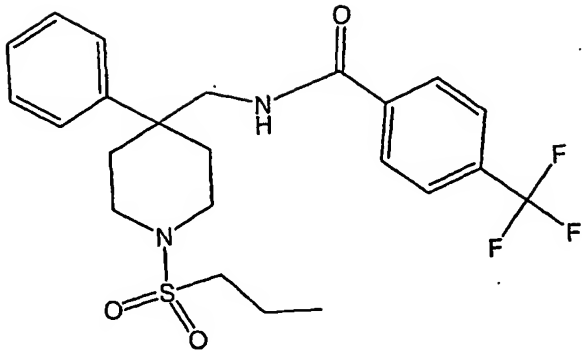


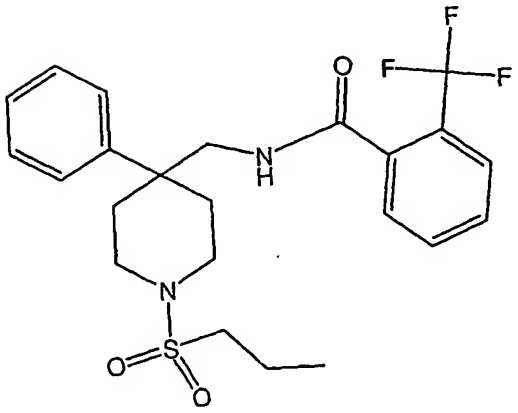


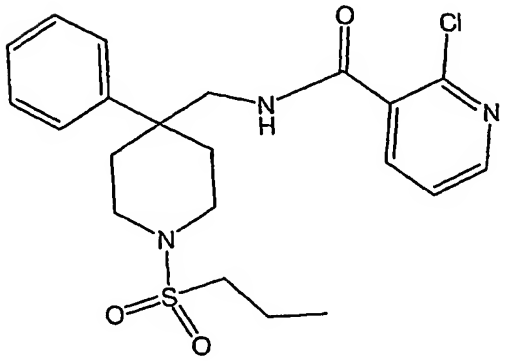


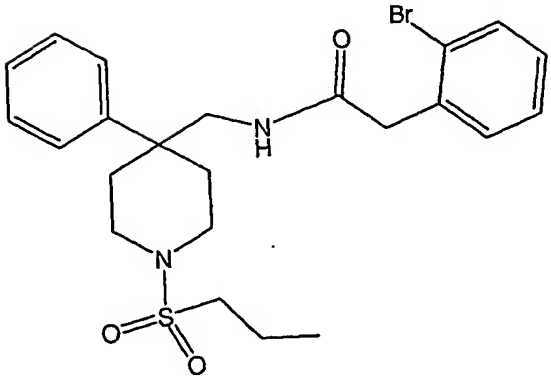


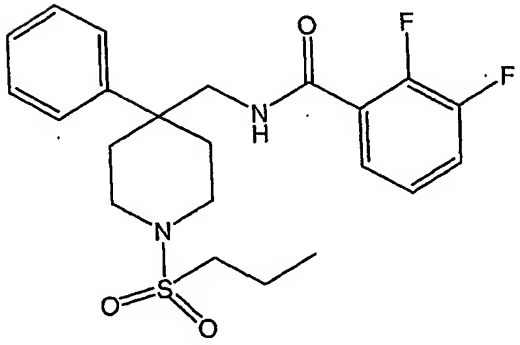


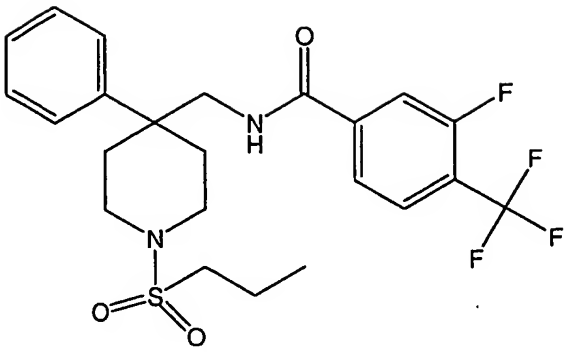


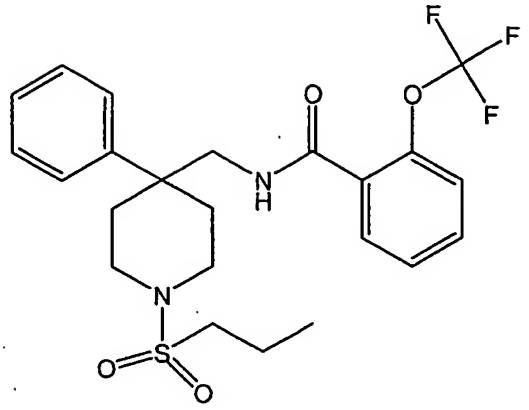


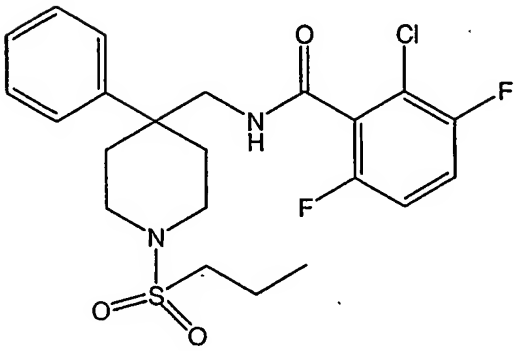


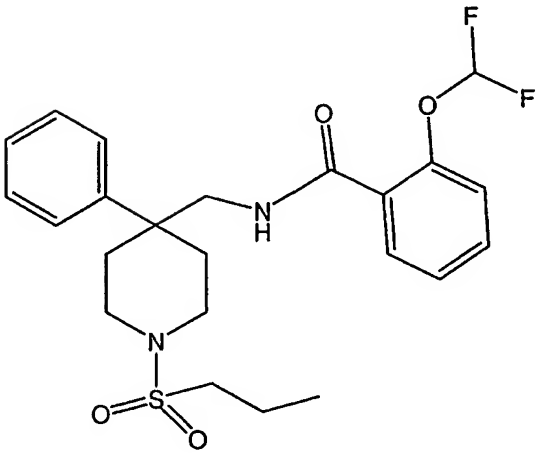


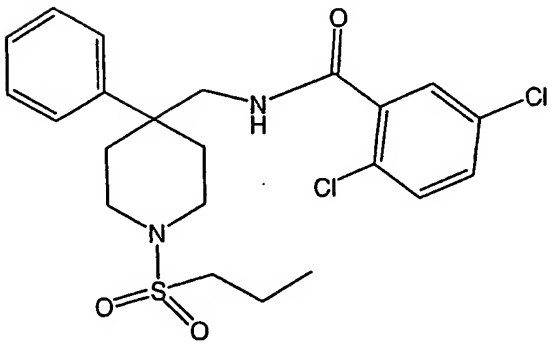


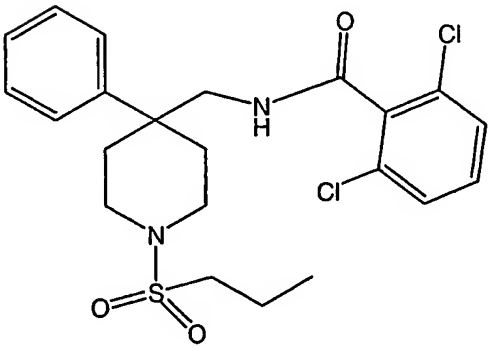


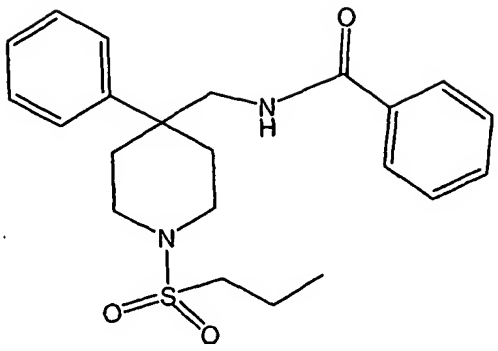


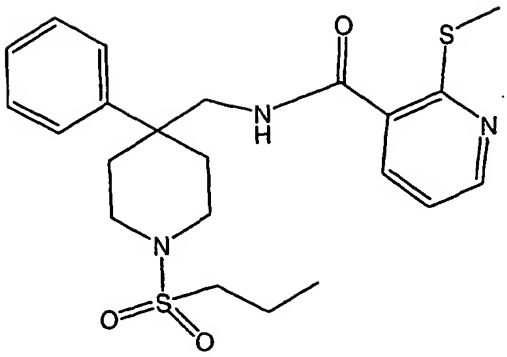


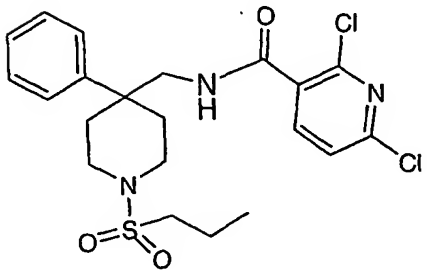


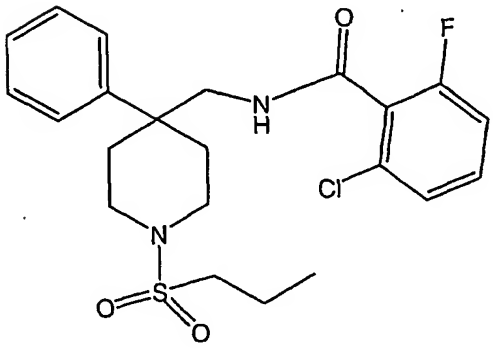


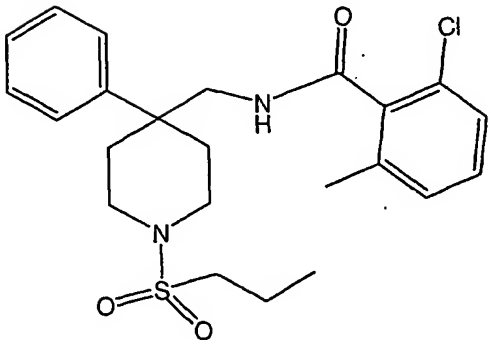


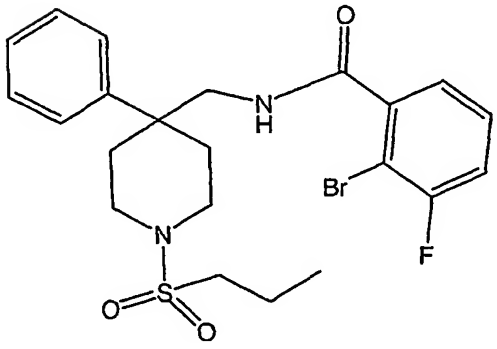


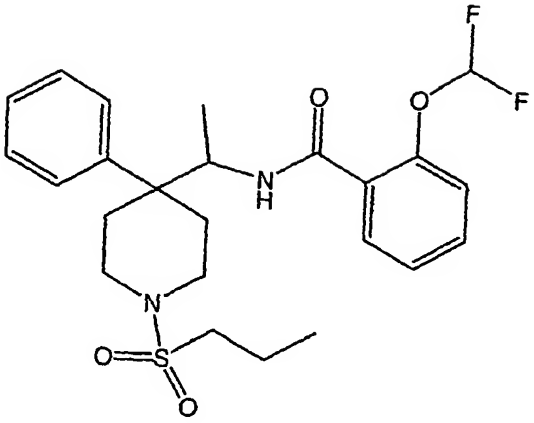


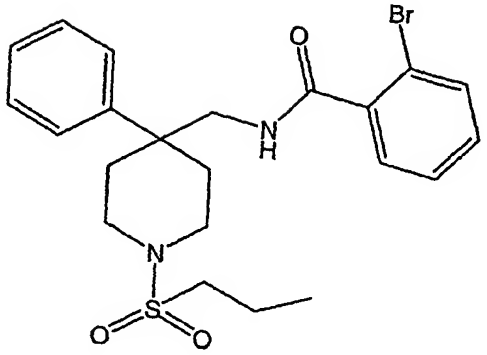


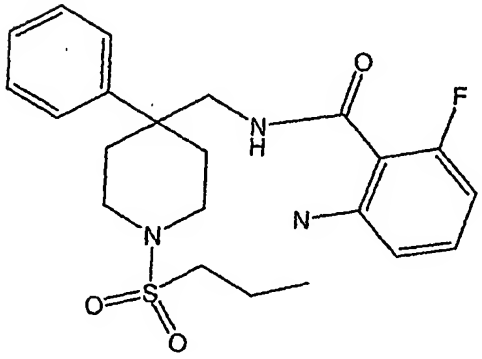


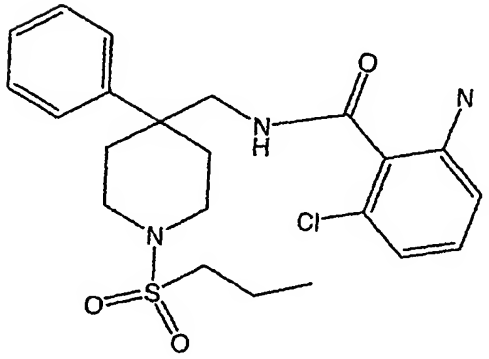


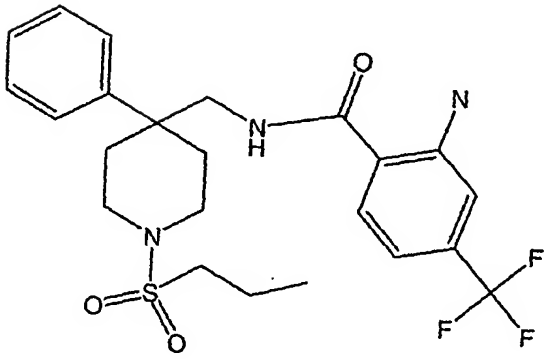


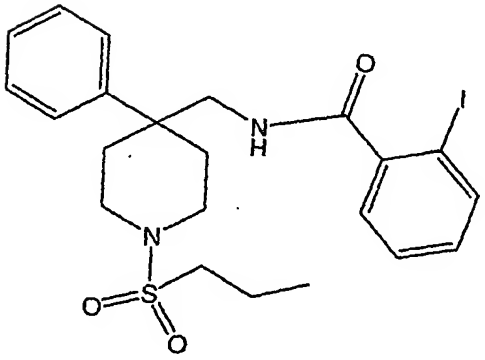


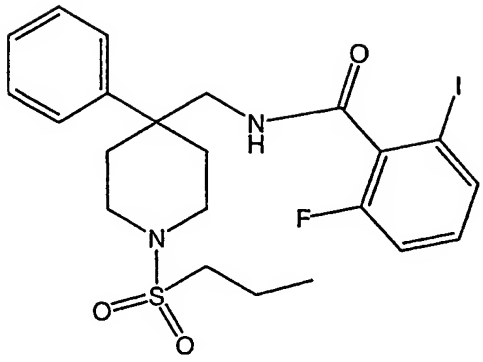


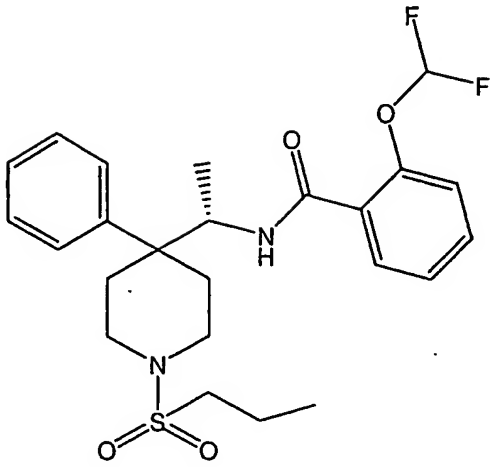


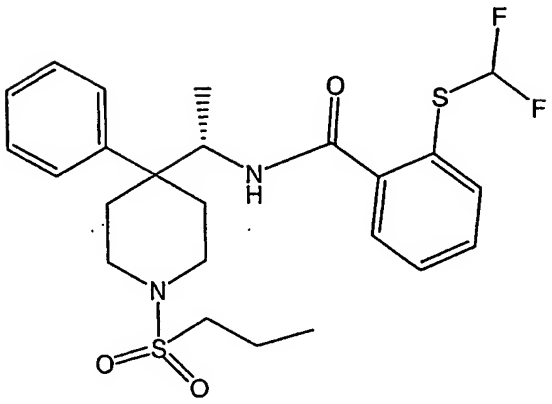


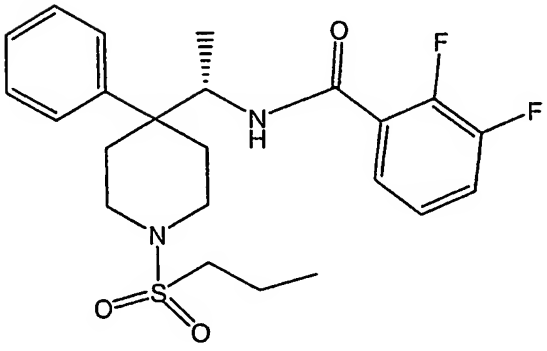


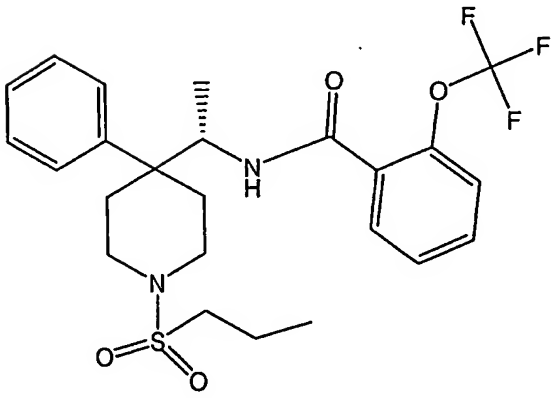


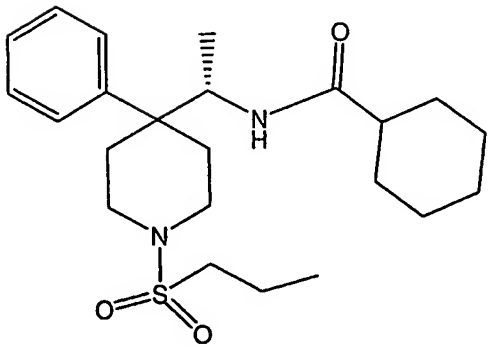


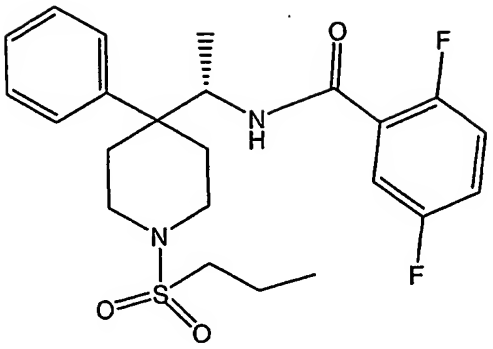


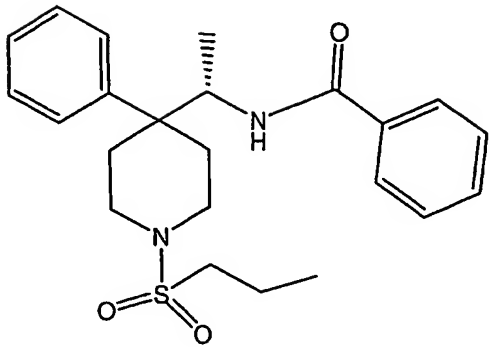


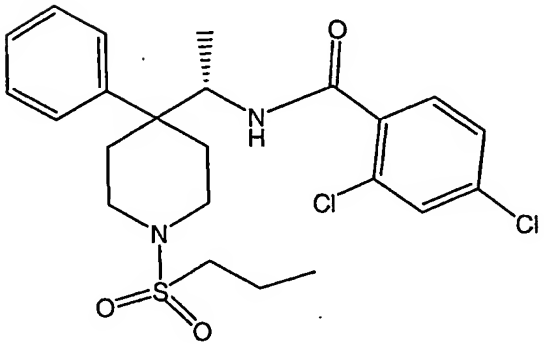


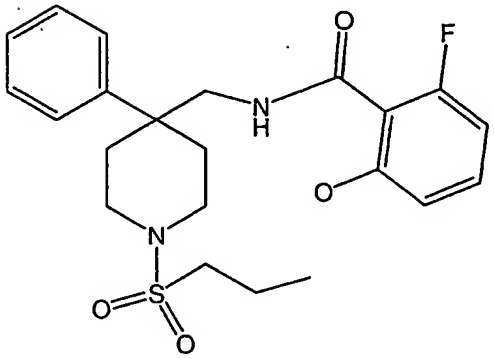


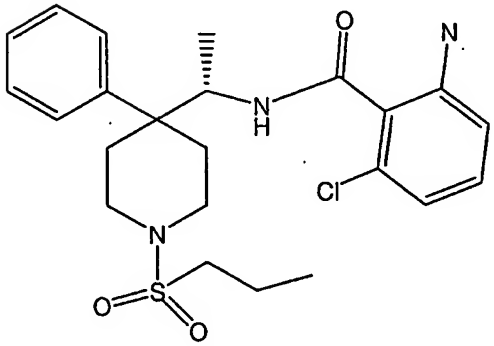


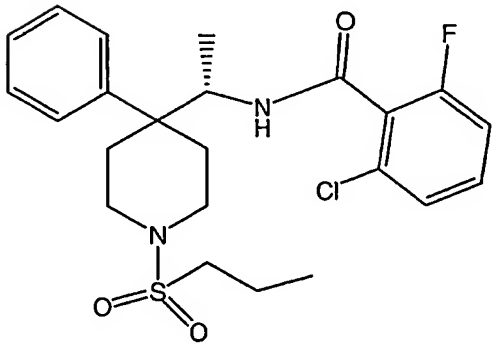


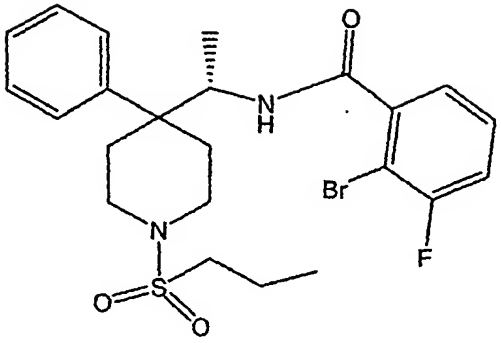


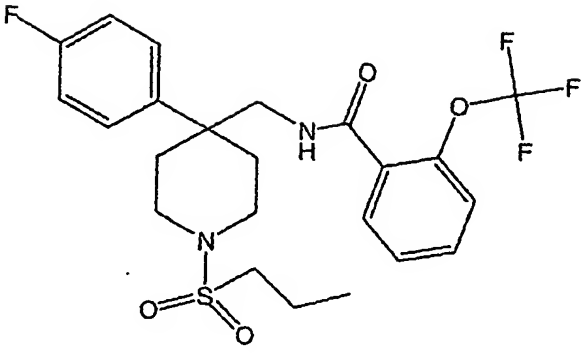


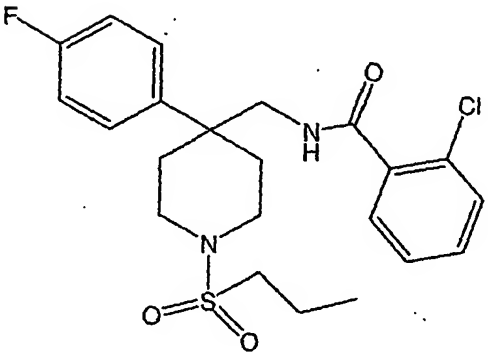


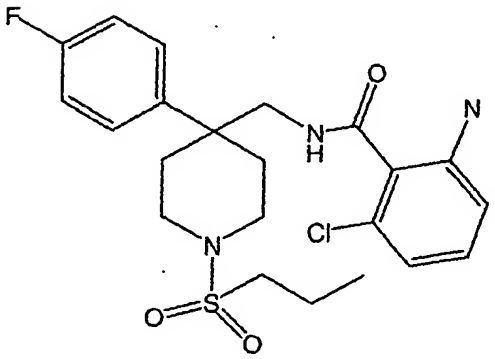


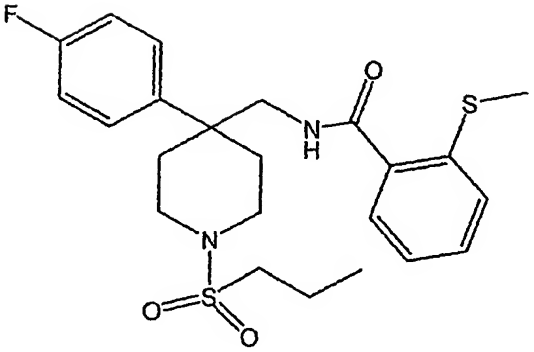


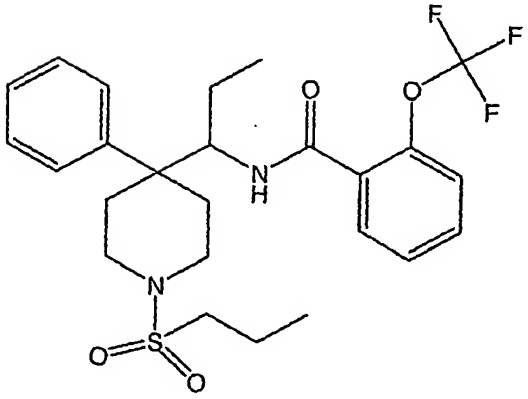


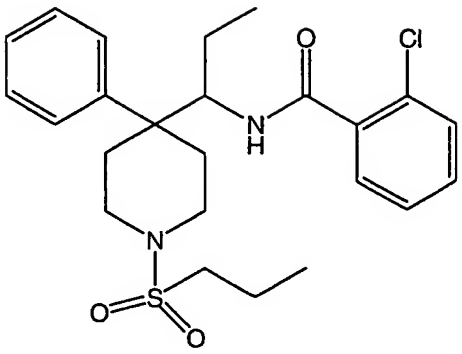


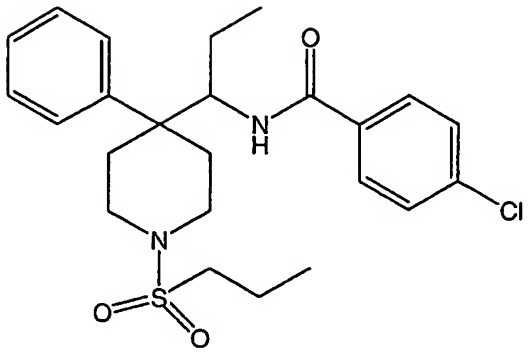


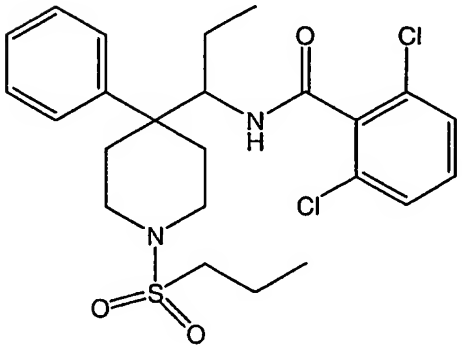


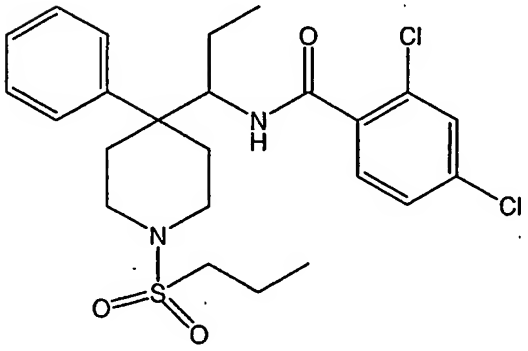


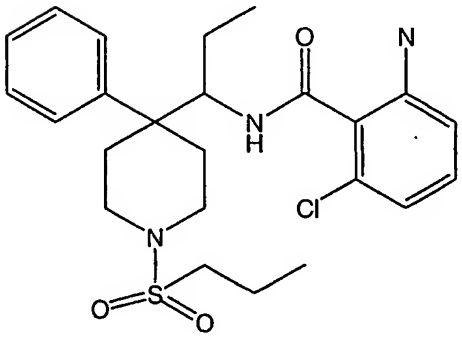


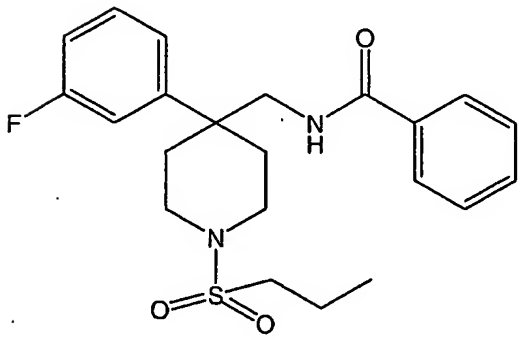


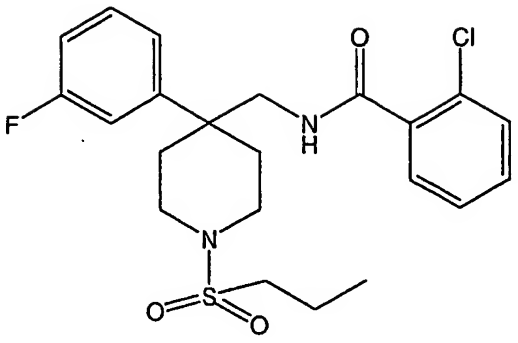


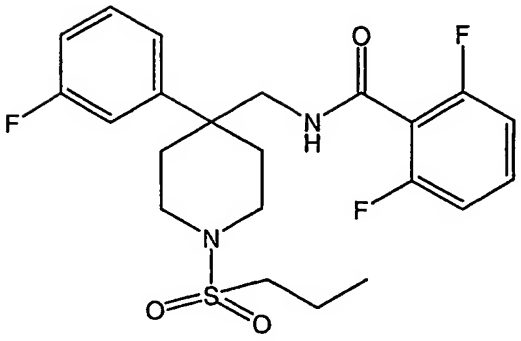


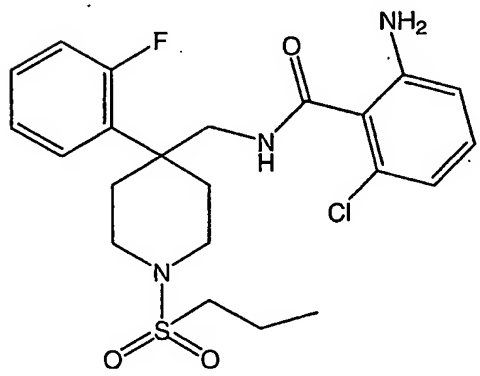


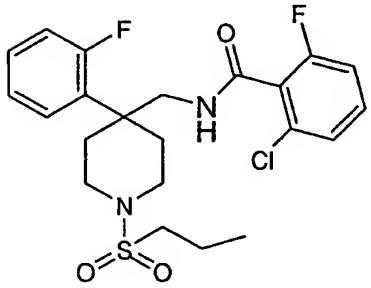


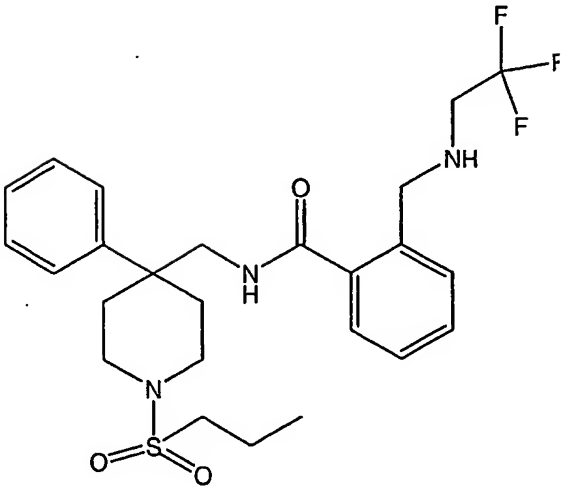


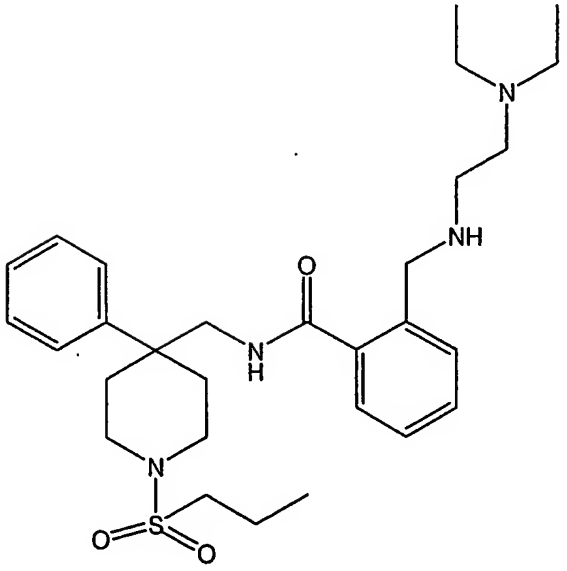


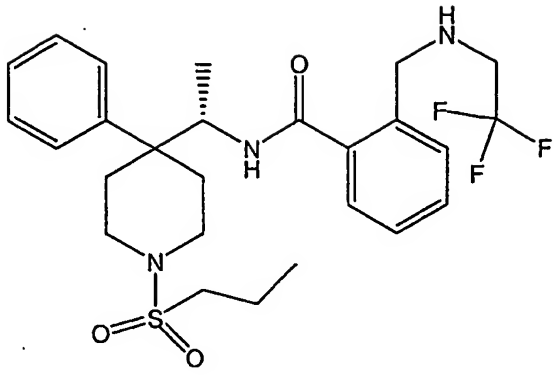


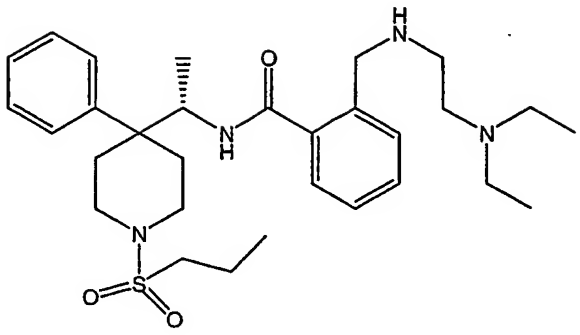


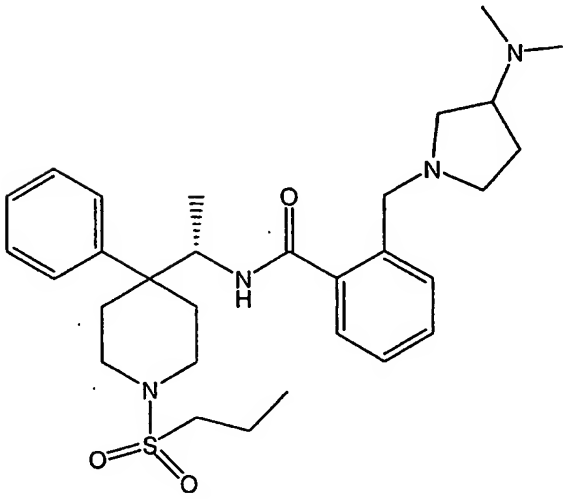


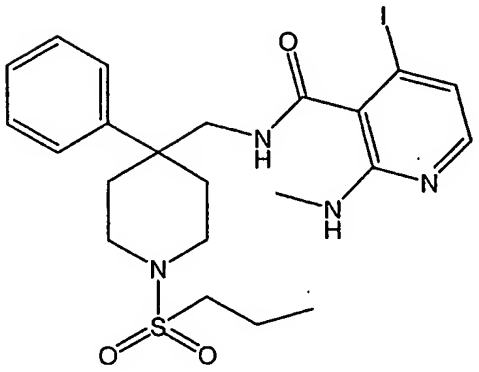


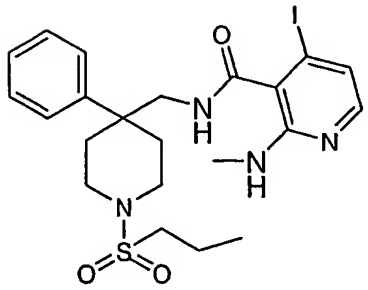


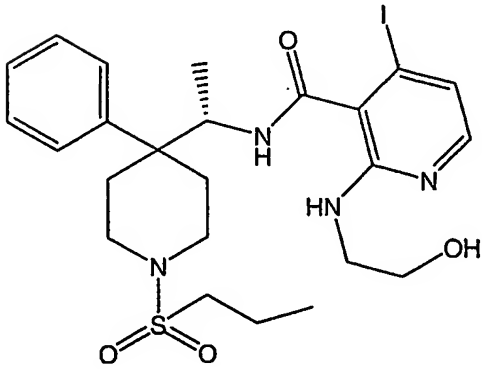












and pharmaceutically acceptable salts thereof.

18. A pharmaceutical composition which comprises an inert carrier and a compound of Claim 1.

19. A method for inhibiting the glycine transporter GlyT1 in a mammal in need thereof which comprises the administration of an effective amount of the compound of Claim 1.

20. A method for the manufacture of a medicament for inhibiting the glycine transporter GlyT1 in a mammal in need thereof comprising combining the compound of Claim 1 with a pharmaceutical carrier or diluent.

21. A method for treating a neurological and psychiatric disorders associated with glycinergic or glutamatergic neurotransmission dysfunction in a mammalian patient in need thereof which comprises administering to the patient a therapeutically effective amount of a compound of Claim 1.

22. A method for treating schizophrenia in a mammalian patient in need thereof which comprises administering to the patient a therapeutically effective amount of a compound of Claim 1.

23. A method for treating anxiety in a mammalian patient in need thereof which comprises administering to the patient a therapeutically effective amount of a compound of Claim 1.

24. A method for treating a cognitive disorder or dementia in a mammalian patient in need thereof which comprises administering to the patient a therapeutically effective amount of a compound of Claim 1.

25. A method for treating bipolar disorders in a mammalian patient in need thereof which comprises administering to the patient a therapeutically effective amount of a compound of Claim 1.

26. A method for treating depression in a mammalian patient in need thereof which comprises administering to the patient a therapeutically effective amount of a compound of Claim 1.